2010 City Drinking Water Quality Report

Definitions

Public Health Goal (PHG)
The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Contaminant Level Goal (MCLG)
The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

Maximum Contaminant Level (MCL)
The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Residual Disinfectant Level Goal (MRDLG)
The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Maximum Residual Disinfectant Level (MRDL)
The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Regulatory Action Level (AL)
The concentration of a contaminant which, if exceeded, triggers a treatment or other requirements which a water system must follow.

Treatment Technique (TT)
A required process intended to reduce the level of contaminants in drinking water.

Primary Drinking Water Standards (PDWS)
MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

Secondary Drinking Water Standards (SDWS)
MCLs for contaminants that affect taste, odor, or appearance of drinking water. Contaminants with SDWS do not affect the health at MCL levels.

Unregulated Contaminant Monitoring Regulations (UCMR)
Data generated by the new UCMR will be used to evaluate and prioritize contaminants on the Drinking Water Contaminant Candidate List, a list of contaminants EPA is considering for possible new drinking water standards. Also known as "State Regulated Contaminants with No MCLs."

Legend

µg/L:	Micrograms per liter (parts per billion)
mg/L :	Milligrams per liter (parts per million)
ND:	Not detected at testing limit
NTU:	Nephelometric Turbidity Units
pCi/L :	PicoCuries per liter (a measure of radiation)
µmhos/cm:	Micromhos per centimeter
DBP:	Disinfection By-products
TOC:	Total Organic Carbon
NA:	Not applicable or no standard or no data

PRIMARY STANDARDS

Regulated Contaminants with Primary MCLs or MRDLs

	MCL	PHG	Highest % of Positives / Highest Single Measurement		Samples ≤0.3 NTU	Major Sources in Drinking Water
Microbiological Contaminants						
Total Coliform Bacteria	5% of monthly samples test positive	MCLG, 0	1.33%			Naturally present in the environment
Turbidity (NTU)	TT = 1 NTU TT = 95% of samples ≤0.3 NTU	NA	Highest Single Measurement 0.06		100%	Natural river sediment/soil run-off
Lead/Copper Rule *Monitored at the Customer's Tap in 2009* The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.			90th % Value	# of Sites Sampled	# of Sites Exceeding Action Level	
Copper (mg/L)	AL, 1.3	0.3	0.26	31	0	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (µg/L)	AL, 15	0.2	2.9	31	0	
Disinfection By-products, Disinfectant Residuals, and Disinfection By-product Precursors			System Wide Average		System Wide Range	
Total Trihalomethanes (µg/L)	80	NA	42.3		1.7 - 78.3	By-product of water disinfection
Haloacetic Acids (µg/L)	60	NA	11.0		ND - 25	By-product of water disinfection
Disinfectant - Chlorine as Cl_2 (mg/L)	MRDL, 4.0	MRDLG, 4	0.72		0.11 - 1.82	Drinking water disinfectant added to treatment
	MCL	Public Health Goal	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range	
Control of DBP Precursors - TOC (mg/L)	TT	NA	2.62	2.4 - 2.9	0.22	ND - 0.62	Various natural and manmade sources. Total Organic Carbon (TOC) has no health effects. However, it provides a medium for the formation of disinfection by-products.
Radioactive Contaminants							
Gross Alpha Particle Activity (pCi/L)	15	MCLG, 0	ND	NA	0.72	ND - 4.90	Erosion of natural deposits
Radon (pCi/L)	NA	NA	NA	NA	450	350 - 590	See reporting notice on Radon in this report.
Inorganic Contaminants							
Aluminum (mg/L)	1	0.6	0.08	0.02 - 0.28	0.06	ND - 0.72	Erosion of natural deposits
Arsenic (µg/L)	10	0.004	1.6	ND - 4.6	0.8	ND - 17.6	Erosion of natural deposits
Chromium (µg/L)	50	MCLG, 100	1.8	ND - 5.1	3.7	ND - 12.9	Erosion of natural deposits
Fluoride (mg/L)	2.0	1	0.39	0.32 - 0.5	0.34	0.20 - 0.58	Erosion of natural deposits; discharge from fertilizer & aluminum factories
Nitrate as NO_3 (mg/L)	45	45	ND	NA	7.85	ND - 34.4	Erosion of natural deposits; run-off from fertilizer use
Selenium (µg/L)	50	30	ND	NA	1.9	ND - 7.4	Erosion of natural deposits

State Regulated Contaminants with No MCLs, i.e. Unregulated Contaminants

	MCL	Public Health Goal	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range
Boron (µg/L)	Notification Level, 1000	NA	350	NA	120	80 -170
Hexavalent chromium, Cr VI (µg/L)	NA	NA	0.04	ND - 0.2	0.6	ND - 2.1

SECONDARY STANDARDS

Aesthetic Standards Established By the State of California, Department of Health Services. No adverse health effects from exceedance of standards.

Regulated Contaminants with Secondary MCLs

	MCL	Public Health Goal	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range	
Color (Units)	15	NA	ND	NA	0.48	ND - 5	Naturally-occurring organic materials
Copper (mg/L)	1.0	NA	0.02	0.01 - 0.02	0.05	ND - 0.21	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Iron (µg/L)	300	NA	2.85	ND -37	44	ND -193	Leaching from natural deposits
Manganese (µg/L)	50	NA	0.8	ND - 4.9	66.1	ND - 200	Naturally-occuring organic materials; causes discoloration of water
Methyl-tert-butyl ether (MTBE) (µg/L)	5	NA	ND	NA	1.3	3.2 - 7.8	Leaking underground gasoline storage tanks; discharge from gasoline and chemical factories
Threshold Odor Number at 60 °C (units)	3	NA	5	1 -10	7	1 - 12	Naturally-occurring organic materials
Turbidity, Laboratory (NTU)	5	NA	0.11	0.05 - 0.23	0.49	0.13 - 2.09	Soil run-off
Total Dissolved Solids (mg/L)	1000	NA	614	560 - 678	775	522 - 1150	Run-off / leaching from natural deposits
Specific Conductance (µmhos/cm)	1600	NA	884	794 - 967	1166	835 - 1637	Substances that form ions when in water; seawater influence
Chloride (mg/L)	500	NA	21.4	17 - 25.2	90.7	33.8 - 184	Run-off / leaching from natural deposits; seawater influence
Sulfate (mg/L)	500	NA	264	220 - 361	222	146 - 310	Run-off / leaching from natural deposits

Additional Constituents

pH (units)	NA	NA	8.15	8.03 - 8.43	6.95	6.77 - 7.25
Total Hardness as $CaCO_3$ (mg/L)	NA	NA	389	342 - 444	476	315 - 672
Total Alkalinity as $CaCO_3$ (mg/L)	NA	NA	190	174 - 210	244	190 - 307
Calcium as Ca (mg/L)	NA	NA	87.5	77.7 - 100	124	84.1 - 163
Magnesium (mg/L)	NA	NA	39.3	33.3 - 45.4	40.0	24.9 - 68.1
Sodium (mg/L)	NA	NA	46.1	42.4 - 50.4	67.2	6.1 - 100
Potassium (mg/L)	NA	NA	4.10	3.6 - 4.71	2.00	1.31 - 3.27
Uranium (µg/L)	NA	NA	NA	NA	3.0	ND - 6.7

Note: Listed in the table above are substances detected in the City's drinking water. Not listed are more than 135 regulated and unregulated substances that were below the laboratory detection level. The City has received an extension to comply with the new Federal drinking water standards for disinfection by-products. Nonetheless, the City is currently meeting the new standards.